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Patent
Attorney Docket No. ITW7510.074

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Stein et al.
Serial No. : 10/605,546
Filed : October 7, 2003
For : Method and Apparatus to Adaptively Cool A
Welding-type System
Group Art No. : 1725
Examiner : Kerns, K.

CERTIFICATION UNDER 37 CFR 1.8(a) and 1.10

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Jessica A. Calaway

Commissioner for Patents
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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

A Notice of Appeal is filed concurrently herewith. Applicant hereby requests pre-appeal review of the final rejection in the above-identified Application. Review is requested for the reasons set forth below.

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REMARKS

Claims 1-23 are pending in the present application. In the Final Office Action mailed July 19, 2005, the Examiner rejected claims 1-23 under the judicially created doctrine of obviousness-type double patenting. The Examiner next rejected claims 1-23 under 35 U.S.C. §102(b) as being anticipated by Prunier (FR 2, 536,320). Claims 1-23 were also rejected under 35 U.S.C. §102(b) as being anticipated by Behnke et al. (USP 2,510,207).

The Examiner also objected to the Specification and rejected claims 12-17 under 35 U.S.C. §112, second paragraph. The Examiner suggested corrections and amendments thereto which would overcome the objection and §112 rejection. In the Response of September 22, 2005, Applicant amended the Specification and claim 12 to address the issues therewith, respectively. In the Advisory Action of January 12, 2006, the Examiner indicated that the amendments have been entered and have overcome the §112, second paragraph rejection. Accordingly, the issues remaining for appeal, and the subject of this Pre-Appeal Brief Conference Request are (1) whether claims 1-23 are anticipated under 35 U.S.C. §102(b) by Prunier (FR 2, 536,320) and (2) whether claims 1-23 are anticipated under 35 U.S.C. §102(b) by Behnke et al. (USP 2,510,207).

Applicant believes that this request is proper and that the panel has jurisdiction over this matter because (1) claim limitations are wholly absent from the applied references; (2) the Examiner improperly applied "inherency"; (3) the Examiner has improperly dismissed claim limitations because "Applicants claims include multiple functional ('conditional') limitations that are 'capable of' being performed by the arc welding machines of Prunier and Behnke et al.", even though these references disclose no such "capability"; and (4) the Examiner maintained a provisional double patenting rejection over a pending application that has not issued and is not allowed. Since there errors are not simply an interpretation of the references, Applicant believes this request is proper.

In the Final Office Action of September 19, 2005 the Examiner rejected claims 1-23 as anticipated by Prunier. In setting forth the rejection, the Examiner summarized the claims and directed Applicant's attention to the "abstract; translation of French Text of the specification and claims; and Figure". In the Response of September 22, 2005 Applicant indicated several elements of the present claims which are not disclosed or even suggested in Prunier. See *Response of September 22, 2005*, pg. 11, ¶3 to pg. 13, first ¶. Responsive thereto, in the Advisory Action of January 12, 2006, the Examiner found Applicant's remarks unpersuasive and directed Applicant to various sections of the French Translation of Prunier. Applicant has reviewed the entirety of Prunier with particular emphasis on the referenced passages. However, there is simply no disclosure or suggestion of a cooling system as presently claimed within the four corners of Prunier.

In the Advisory Action, the Examiner asserted that "[c]ontrary to applicants' arguments, the arc welding machines of Prunier and Behnke et al. include structural features that are expressly

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disclosed and/or *inherently capable of the functionalities* in the applicants' claims" (emphasis added). The Examiner stated: "The applicants' claims include multiple functional ('conditional') limitations that are 'capable of' being performed by the arc welding machines of Prunier and Behnke et al." Applicant respectfully disagrees.

To anticipate a claim, MPEP §2131 requires that "The identical invention must be shown [in the reference] in as complete detail as is contained in the ... [rejected] claim[s]." Citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claim 1 calls for, in part, a welding-type system having a cooling system which maintains coolant circulation upon deactivation of a welding-type component if a measured coolant temperature exceeds a threshold. There is nothing optional about the limitation. Minimally, the system called for in claim 1 requires monitoring or measuring of the temperature of the coolant. Coolant is circulated through the welding-type component (1) after the welding-type component has been deactivated and (2) as long as the temperature is above a threshold. These limitations are not conditional but are explicitly called for in the system of claim 1. In order to anticipate claim 1, Prunier and/or Behnke et al. must (1) disclose maintaining cooling flow after deactivation of the welding-type component and (2) must disclose that the coolant flow is maintained as long as a measured coolant temperature exceeds a threshold. There is no disclosure in Prunier for such limitations. The additional citations to Prunier in the Advisory Action are of no assistance to the Examiner's allegations. Further although Behnke et al. discloses maintaining coolant circulation after deactivation of a torch in a 1949 reference, Behnke et al. does not disclose, or even suggest, that the flow of coolant is maintained for a duration dependent on a measured temperature of the coolant. Applicant will further address Behnke et al. after discussing the alleged "inherent" disclosure of Prunier.

Prunier clearly discloses a torch cooling system which suffers from the same drawbacks discussed in the Background of the present Application, which the present Invention overcomes. There is no disclosure in Prunier, or in the Examiner's pinpoint citations thereto, that the coolant thereof is automatically circulated upon activation of the welding-type component and maintained upon deactivation of the welding-type for a duration that is determined from a measured temperature. As Prunier is directed to a weld wire cleaning system, Prunier lacks any disclosure of the control of the cooling system thereof. There is no disclosure in Prunier for measuring the temperature of the coolant in order to control the duration of circulation as called for in claim 1. Since Prunier does not describe any control for its cooling system, it is wholly inappropriate to suggest the presently claimed invention is "inherent" in Prunier. It is equally inappropriate to suggest these limitations are "conditional." The Examiner has discounted entire claim limitations, and for that reason alone, this Request is believed properly decided in favor of allowing all pending claims.

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Claim 12 calls for, in part, a controller that is configured to (A) regulate the coolant system such that when the torch is activated coolant is automatically caused to flow to the welding torch, (B) monitor a temperature of the coolant after deactivation of the torch, and (C) continue to circulate coolant until a temperature of the coolant falls below a predetermined value. Claim 18 calls for, in part, automatically circulating coolant through a welding-type component upon a detected actuation of a welding-type component, monitoring coolant temperature upon deactivation, and maintaining coolant circulation if the coolant temperature exceeds a threshold. Claim 23 calls for, in part, means for automatically circulating coolant through at least means for providing welding-type power upon activation of means for outputting welding-type power, means for detecting deactivation of the means for outputting welding-type power, means for determining coolant temperature, and means for maintaining coolant circulation until coolant temperature falls below a certain set point. Each of these claims calls for a plurality of specific elements and specific acts that clearly define patentable distinctions over the art of record. These elements cannot simply be dismissed by alleging that the language is conditional and/or that it is inherent in the art of record.

Contrary to the Examiners statements in the Advisory Action of January 12, 2006, nowhere in Prunier is a system disclosed, suggested, or even remotely inferred as that defined by claims 12, 18, and 23. There is no disclosure in Prunier, not even an inference, that the coolant system thereof includes (1) a control for automatic operation of the cooling system, (2) that the temperature of the coolant system is monitored, (3) that the coolant system continues to operate after deactivation of the welding-type component, or (4) that the monitored temperature controls the operation of the coolant system after the deactivation of the welding-type component. To allege that these features are expressly or inherently disclosed in Prunier is well beyond that which is shown and/or disclosed therein. Furthermore, to allege that these claim limitations are conditional or optional, requires a disregard of the entirety of these claims. The claims define a plurality of elements and the interrelation of those elements. That plurality of elements and interrelation therebetween is not disclosed or inferable from Prunier. Prunier discloses nothing to lead one to even guess that it has the "capability" to act in a way structurally set forth in the present claims. Accordingly, Applicant believes claims 1-23 are patentably distinct thereover.

The Examiner also rejected claims 1-23 under 35 U.S.C. §102(b) as being anticipated by Behnke et al. maintaining that "[t]he applicant's claims include multiple functional ('conditional') limitations that are 'capable of' being performed by the arc welding machine[] of ... Behnke et al." Advisory Action of January 11, 2005. Again, Applicant's claim limitations cannot be dismissed as "conditional" limitations. The claims recite a plurality of elements and how those elements interrelate and cooperatively operate, and each clearly define over the art of record. A system according to the presently claimed invention is simply not disclosed, taught, or suggested in Behnke et al.

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Applicant does not disagree that Behnke et al. indicates that it is desirable "to provide an automatic control for cutting off the flow of cooling water after the electrode has cooled below [an] oxidation temperature." Behnke et al. col. 1, lns. 24-27. However, this is not what is presently claimed. Applicant agrees that such an object is desirable. However, contrary to the conclusion of the Examiner, the reference teaches a method and system to cool that is substantially different from that claimed.

Specifically, the reference teaches a timed control loop whereupon a length of time is predetermined and coolant flows until expiration of that length of time on the presumption that the torch will cool to a desired temperature during that length of time. Behnke et al. states that "[w]hen the welding arc is extinguished by removing the electrode from proximity to the workpiece, the relay 10 is energized to close its switch 18, energize the timer 14 and start its motor 28 running." Behnke et al., col. 3, lns. 55-59. In this regard, "At the expiration of the time delay period, the timer 14 opens its switch 27 which closes the argon valve 15 and the water valve 16." Id., col. 3, lns. 59-61. Behnke et al. merely teaches that the coolant flows until a timer expires. With this technique, coolant flow ceases regardless of the actual temperature of the welding torch or coolant. If the torch or coolant temperature is at or below the given temperature before expiration of the timer, coolant still flows. This continued flow unnecessarily expends energy and thus contributes to system inefficiency. Similarly, coolant flow ceases at the expiration of the timer even if actual torch or coolant temperature exceeds the desired temperature. That is, with the system of Behnke et al., there is a presumption that the set time of the timer is of sufficient length to provide for adequate cooling. However, one can readily appreciate that for different welding applications and/or conditions, different cooling times may be required (or none at all), but with the system of Behnke et al., a "presumed" temperature may not match actual cooling needs and therefore a timed cool-down may not be sufficient, or may be too much and a waste.

In contrast, Applicant claims a dynamic cooling control system. As argued above, claims 1-23 call for a method and/or system whereby coolant flow is maintained after deactivation of a welding-type process until the temperature of the coolant and/or welding-type component exceeds a threshold. Such a system is not disclosed, or even suggested, in Behnke et al. The Examiner maintains that if "the electrode in the Behnke et al. invention is above 'oxidation temperature', then coolant would continue to flow until it is below the 'oxidation temperature'" and that "[a]s a result, all of independent claims 1, 12, 18, and 23 (and claims dependent therefrom) do not patentably distinguish over Behnke et al." Final Office Action of September 19, 2005, pg. 7, first paragraph. Such an assertion requires complete disregard of the fact that the Behnke et al. system maintains coolant flow based on a timer and therefore ignores specific claim limitations in the present claims. There is simply no disclosure in Behnke et al. that the coolant system thereof circulates coolant for a duration

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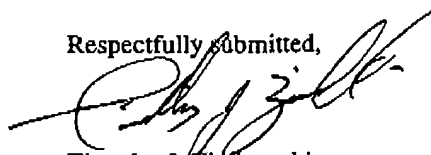
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determined by the temperature of the coolant as is called for in the present claims. Behnke et al. expressly discloses that the coolant is circulated for a predetermined time, i.e. regardless of the temperature of the coolant. That which is called for in the present claims is simply not shown, disclosed, taught, suggested, or inferable from the art of record. Accordingly, Applicant asserts that claims 1-23 are patentably distinct thereover.

An outstanding provisional obviousness-type double patenting rejection also remains over the claims of co-pending application U.S. Ser. No. 10/604,459. As the co-depending matter has yet to issue, nor been allowed, this rejection is moot.

Applicant appreciates the Panel's review and consideration. In light of at least the foregoing, Applicant respectfully requests the Panel's favorable action in reversing the Examiner's prior art rejections and timely issuance of a Notice of Allowance for claims 1-23.

Respectfully submitted,



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